

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Applicant : Shifman et al.
Serial No. : _____ (Divisional Application of U.S.S.N. 09/754,674)
Filed : _____ (Parent Application Filed 01/04/2001)
For : **"BLENDS OF FLUOROELASTOMER INTERPOLYMERS WITH
FLUOROPLASTIC INTERPOLYMERS AND THE USE OF SUCH
BLENDS IN HOSES"**
Examiner : S. Nolan
Art Unit : 1772

Assistant Commissioner of Patents
Washington, D. C. 20231

Sir:

AMENDMENT

In response to the Office Action mailed on August 28, 2001 having a shortened period for reply set to expire on November 28, 2001, please amend the above-identified application as follows:

This application is a divisional application of U.S.S.N. 09/754,674, filed January 4, 2001. Please amend this divisional application as follows:

IN THE SPECIFICATION:

On page 1, before line 3, insert the following new paragraph:

Cross Reference to Related Applications

This application is a divisional patent application of copending application, Serial No. 09/754,674, filed January 4, 2001, which is a divisional application of Serial No. 09/083,294,

20071634-020702

filed May 22, 1998, now U.S. Patent No.6,203,294.

Replace the last paragraph beginning at line 18 on page 10 with the following new paragraph:

The compositions of the present invention are either unvulcanized or vulcanized using any of the prior established vulcanizing agents such as peroxides, polyols, polyamines, etc. The peroxide vulcanizing agent includes, for example, dicumylperoxide, 2, 5-dimethyl-2, 5-di (t-butylperoxy) hexyne-3, etc. The polyol vulcanizing agent includes, e.g., .hexafluoroisopropylidene-bis (4-hydroxyphenyl) hydroquinone, isopropylidene-bis(4-hydroxyphenyl), or the like. The polyamine vulcanizing agent includes, e.g., hexamethylenediamine carbamate, alicyclic diamine carbamate, etc. The amount of vulcanizing agent employed is generally that which is customarily used in the art. Typically, about 0.5 to 10% vulcanizing agent is employed depending on the vulcanizing agent.

A marked-up copy of the changes made in the specification is attached as a separate page entitled "Version with Markings to Show Changes Made "

IN THE CLAIMS:

Please cancel claims 1-20 and add new claims 21-34 as follows:

21. A method of producing a flexible hose construction comprising the steps of:
- (a) forming an inner tube by extruding a layer of an elastomeric material;
 - (b) extruding a barrier layer comprising a blend of fluoropolymers onto said tube;
 - (c) applying a layer of reinforcing fibers onto said barrier layer to form a reinforced tube;
- and
- (d) extruding a protective cover layer onto said barrier reinforced tube, wherein said blend of fluoropolymers comprises a blend of a first fluoropolymer with a second fluoropolymer, said

first fluoropolymer comprising a copolymer, terpolymer or mixture thereof formed by the copolymerization of two or more monomers selected from the group consisting of hexafluoropropylene, vinylidene fluoride and tetrafluoroethylene, wherein said first fluoropolymer exhibits elastomeric characteristics and said second fluoropolymer exhibits thermoplastic characteristics to form a covered reinforced tube.

22. The method of claim 21 wherein said elastomeric material forming said inner tube contains a conductive material.

23. The method of claim 22 wherein said conductive material is carbon black.

24. The method of claim 21 further comprising the steps of vulcanizing said covered reinforced tube.

25. The method of claim 24 wherein said covered reinforced tube is vulcanized with a peroxide, a polyol or a polyamine vulcanizing agent.

26. The method of claim 25 wherein said vulcanizing agent is present in an amount of about 0.5 to 10%

27. The method of claim 25 wherein said covered reinforced tube is vulcanized with a peroxide selected from the group consisting of dicumylperoxide and 2, 5-dimethyl-2, 5-di (t-butylperoxy) hexyne-3.

28. The method of claim 25 wherein said vulcanizing agent is a polyol selected from the group consisting of hexafluoroisopropylidene-bis (4-hydroxyphenyl) hydroquinone and isopropylidene-bis(4-hydroxyphenyl).

29. The method of claim 25 wherein said vulcanizing agent is a polyamine selected from the

group consisting of hexamethylenediamine carbamate and alicyclic diamine carbamate.

30. The method of claim 21 wherein said elastomeric material is an acrylonitrile-butadiene rubber.

31.. The method of claim 21 wherein said first fluoropolymer is a blend of about 20 to 80 weight percent vinylidene fluoride-hexafluoropropylene-tetrafluoroethylene terpolymer having a fluorine content of about 65 to 73 weight percent, said first fluoropolymer having elastomeric characteristics and said second fluoropolymer is a blend of about 80 to 20 weight percent hexafluoropropylene-tetrafluoroethylene-vinylidene fluoride terpolymer having a fluorine content of about 70 to 75 weight percent, said second fluoropolymer having thermoplastic characteristics.

32. The method of claim 21 wherein said reinforcing layer is a layer of fibers selected from the group consisting of polyamide fibers, polyester fibers, rayon fibers, glass fibers and cotton fibers.

33. The method of claim 21 wherein said protective cover layer is a layer of synthetic elastomeric selected from the group consisting of styrene-butadiene rubber, nitrile-butadiene rubber, chloroprene rubber, chlorinated polyethylene, chlorosulfonated polyethylene, epichlorohydrin ethylene oxide, polyvinyl chloride, and blends thereof.

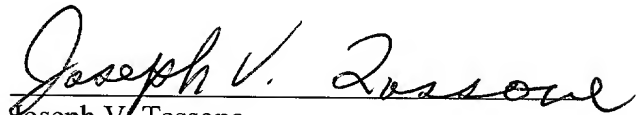
34. The method of claim 33 wherein wherein said protective cover is chlorinated polyethylene.

REMARKS AND INFORMATION DISCLOSURE STATEMENT

This amendment is submitted for the purpose of amending the specification to include cross-reference to related applications, canceling claims 1-20, and adding new claims 21-28.

Since this application is a continuing application of its copending parent application referred to in the Specification as amended herein, wherein applicants submitted copies of prior art information in compliance with 37 CFR 1.97 and 1.98 and wherein the U.S. Patent and Trademark Office cited certain other information, such information need not be provided by applicants in this application. Therefore, it is respectfully requested that the Examiner in this application indicate, in the next office action, that such prior art information has been reviewed and that no separate citation of the same prior art need be submitted in this application.

Respectfully submitted,


Joseph V. Tassone
Reg. No. 20,998

Dayco Products, Inc.
1 Prestige Place
Miamisburg, Ohio 45342
February 7, 2002
Telephone: (937) 226-5725

20071634-020702

Version with Markings to Show Changes Made

Page 1, Before Line 3

Cross Reference to Related Applications

This application is a divisional patent application of copending application, Serial No. 09/754,674, filed January 4, 2001, which is a divisional application of Serial No. 09/083,294, filed May 22, 1998, now U.S. Patent No.6,203,294.

Page 10, lines 18-31

The compositions [composition] of the present invention are either unvulcanized or vulcanized using any of the prior established vulcanizing agents such as peroxides, polyols, polyamines [polyammines], etc. The peroxide vulcanizing agent includes, for example, dicumylperoxide, 2, 5-dimethyl-2, 5-di (t-butylperoxy) hexyne-3, etc. The polyol vulcanizing agent includes, e.g., .hexafluoroisopropylidene-bis (4-hydroxyphenyl) hydroquinone, isopropylidene-bis(4-hydroxyphenyl), or the like. The polyamine vulcanizing agent includes, e.g., hexamethylenediamine carbamate, alicyclic diamine carbamate, etc. The amount of vulcanizing agent employed is generally that which is customarily used in the art. Typically, about 0.5 to 10% vulcanizing agent is employed depending on the vulcanizing agent.